

In the Claims:

1. In a data exchange system for transferring data between a host processor and a target processor comprising a data unit on said target processor that transfers said data from said target processor to an emulator and a device driver on said host processor that transfers data from said emulator, a system for dynamically linking and loading emulation software support for a new target processor comprising:

a target interface module for the host computer that supports the new target processor kind; and

a target interface module for the emulator that supports the new target processor kind.

2. A method for at time of use linking and loading of emulation software for one or more debuggers on a host computer to communicate with a mix of target processors via a JTAG debug link and emulator comprising the steps of: connecting a debugger for each processor to a target interface for that kind of processor; determining if there is support for that kind of processor in the emulator by the target interface communicating with a dynamic loader on the host computer; if not support loading a target interface into the emulator and connecting to an already running emulation software on the host computer; and connecting the target interface software on the emulator to the target interface software on the host computer.

3. The method of Claim 2 wherein said steps are repeated for each debugger, for each kind of processor on the target system.
- 5 4. The method of Claim 2 wherein said determining step includes communicating using ECOM modules on the host computer and emulator over a host computer to emulator connection.
- 10 5. A system for at time of use linking and loading of emulation software for one or more debuggers on a host computer to communicate with a mix of target processors via a JTAG debug link and emulator comprising: a debugger for each processor connected to a target interface for that type of processor; means for determining if there is support for that type of processor in the emulator by  
15 communicating with a dynamic loader on the host computer; means if there is no support for loading a target interface into the emulator and connecting to an already running emulation software on the host computer; and means for providing a connection to the target interface  
20 on the emulator to the target interface software on the host computer.
- 25 6. The system of Claim 3 wherein a single debugger can support more than one kind of processor and including a system description file stored on the host computer describes a particular mix of processors to be supported and said debugger reads the system description to determine which kinds of target interfaces are required

for operation and then it communicates with each required target interface to establish connection.

7. In combination: a single debugger that can support more than one processor or kind of processor; a system description file stored on a host computer describes the particular mix of processors to be supported; said debugger reads this system description to determine which kinds of target interfaces are required for operation and then communicates with each required target interface to establish connection to the target system.

8. The combination of Claim 7 wherein said debugger determines if there is support for that kind of processor in the emulator by the target interface communicating with a dynamic loader on the host computer; if not support loads a target interface into the emulator and connects to an already running emulation software on the host computer; and connects the target interface software on the emulator to the target interface software on the host computer.